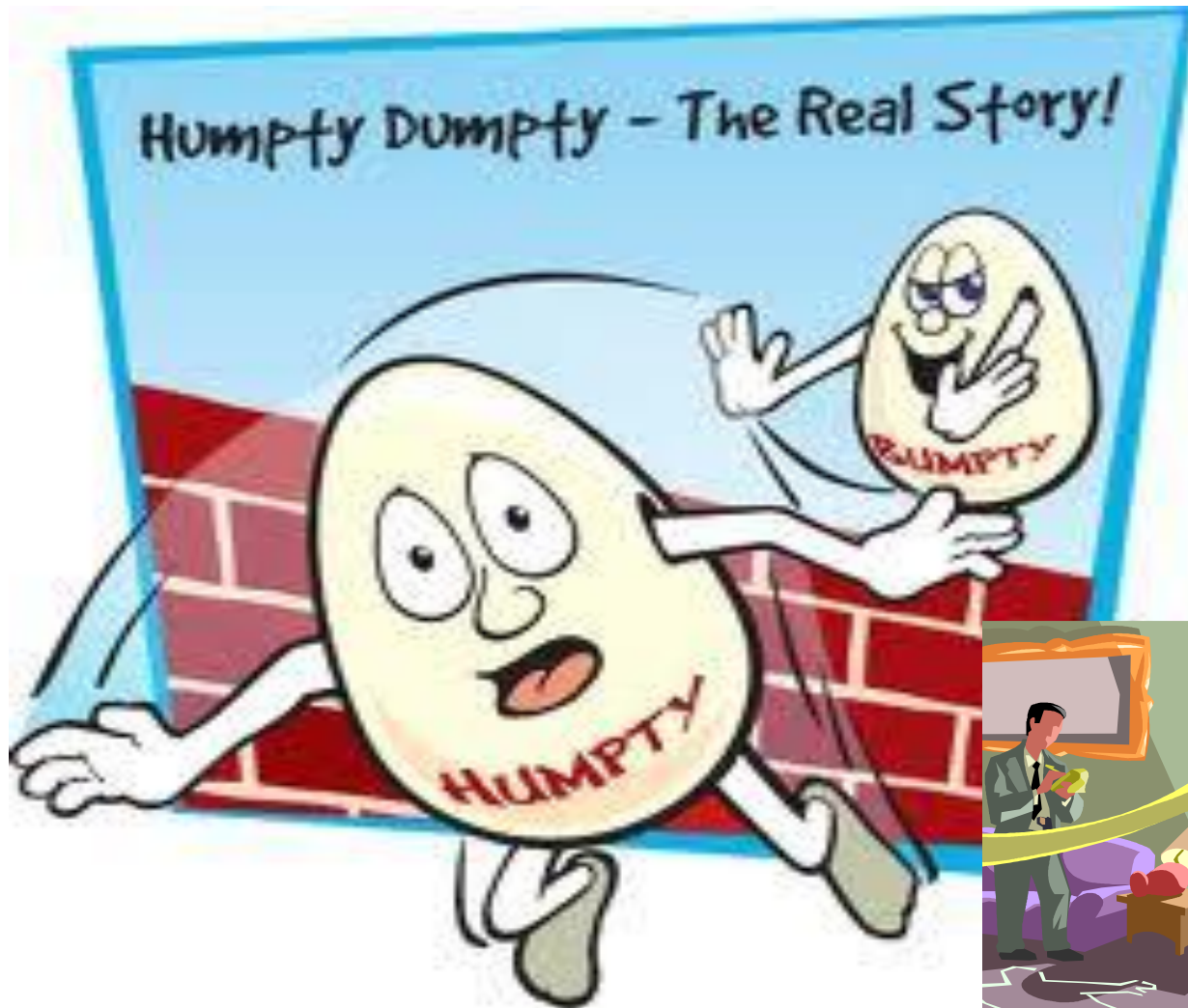


Inquiring Minds Want to Know!



God surprise us with your presence
and grant us the grace to experience
the world with a sense of wonder and awe.

Lord we ask you for the eyes of a child:

To find joy in simple things

To pay attention to the whispers beneath the clamor

To delight in daily discoveries

To see the extraordinary in the ordinary

To peer deeply into the eyes of someone who cares

To see things from a different point of view

To feel the thrill of the quest

To explore whatever is right in front of us

To learn something new and savor that moment

To celebrate the miracle of each moment.

*Lord refresh my sense of curiosity
Open my eyes to your marvels and
Connect me once again with your sacred surprises.*

Amen

believe connections age

fun applied based memorable interesting discovery relevant investigation make

hands-on involve self-discovery practical

science world inquiry journey appropriate meaningful text real user-friendly

interactive exploring cross-curricular engaging

Learning Goals

By the end of this session you will:

- be able to demonstrate an understanding of what inquiry based learning looks like in a science class
- become familiar with the Smarter Science framework
- plan for inquiry in your classroom



Agenda for the Session

- MINDS ON

- Welcome and Prayer
- What's the Big Idea?
- Inquiry Question
- Activating Prior knowledge
 - Is this Inquiry? Graffiti activity
- What is Inquiry?



- ACTION

- Exploring Inquiry-based Learning in Science
- Stops along the inquiry continuum
- The Smarter Science Framework

- CONSOLIDATION

- The Smarter Science Framework: interconnected Literacy, Numeracy, and Science
- Applying the Smarter Science Framework to different inquiries
- Revisiting “What is Inquiry?”

The Big Idea



Inquiry Based Learning

***“Tell me and I forget,
Show me and I remember,
Involve me and I understand”***



Our Inquiry Question:

What can inquiry-based learning
look like in science?



Is this Inquiry?

Graffiti Activity



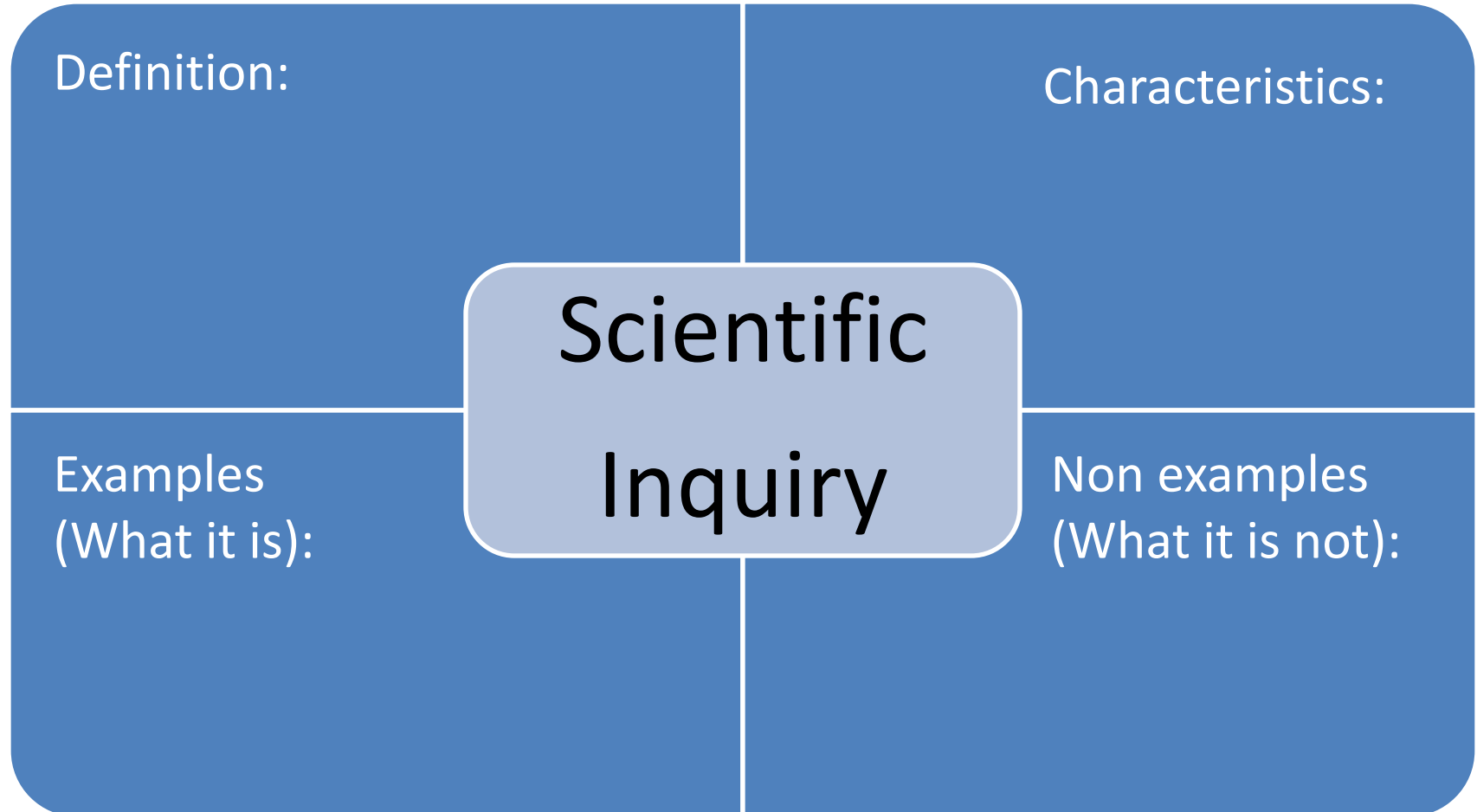
- Visit each of the 6 charts posted.
- Read and discuss the student sample or teacher assignment provided.
- Discuss whether this sample/assignment is “inquiry based” / an example of “inquiry”.
- Record your group’s thoughts and ideas on the chart paper. Respond to or add onto other groups’ ideas.

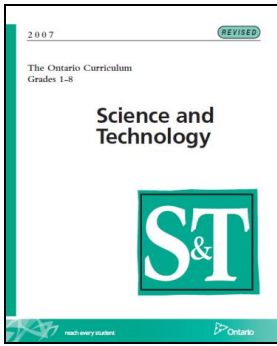


What is Inquiry?

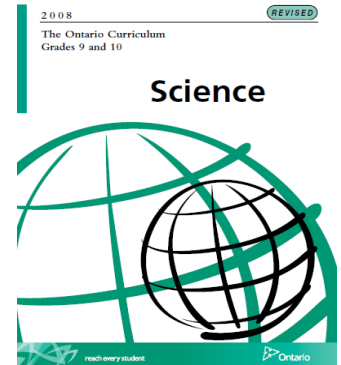


Frayer Model





Curriculum connections to Inquiry

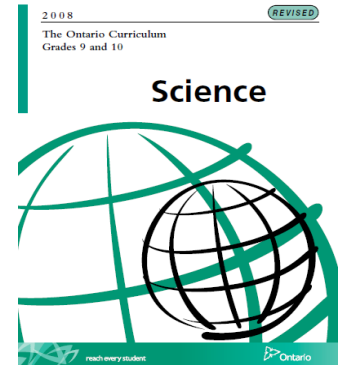


The Goals of the Science (and Technology) Program

- 1. To relate science and technology to society and the environment
- 2. to develop the skills, strategies, and habits of mind required for scientific inquiry/investigation (and technological problem solving)
- 3. to understand the basic concepts of science (and technology)



Curriculum connections to Inquiry

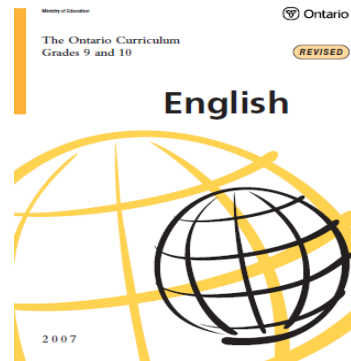
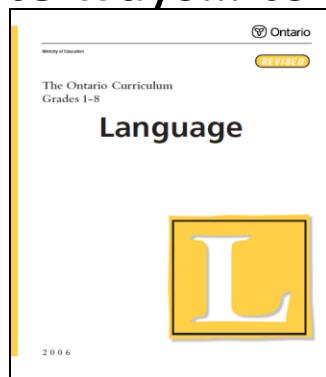


“An inquiry approach, with emphasis on learning through concrete, hands-on experiences, best enables students to develop the conceptual foundation they need.”

- Pg. 29 Science, Gr. 1-8
- Pg. 30 Science, Gr. 9-10
- Pg. 32, Science, Gr. 11-12

Curriculum connections to Inquiry

- “Inquiry is at the heart of learning in all subject areas. Students are encouraged to develop their ability to ask questions and to explore a variety of possible answers to those questions. They acquire the skills to locate relevant information from a variety of sources, such as books, newspapers, dictionaries, encyclopaedias, interviews, videos, and the Internet. The questioning they practised in the early grades becomes more sophisticated as they learn that all sources of information have a particular point of view and that the recipient of the information has a responsibility to evaluate it, determine its validity and relevance, and use it in appropriate ways... to become an independent, lifelong learner.



- Language, Gr. 1 – 8 , pg. 29
- English, Gr. 9 – 10, pg. 34



4 categories of inquiry



- Demo
- Activity or “Cookbook” Lab
- Teacher-initiated
- Student-initiated

The Inquiry Grid

	Demonstration	Activity or “cookbook lab”	Teacher- Initiated Inquiry	Student- Initiated Inquiry
Posing the Question	teacher	teacher	teacher	student
Planning the Procedure	teacher	teacher	student	student
Formulating the Results	teacher	student	student	student

Conversation Partners



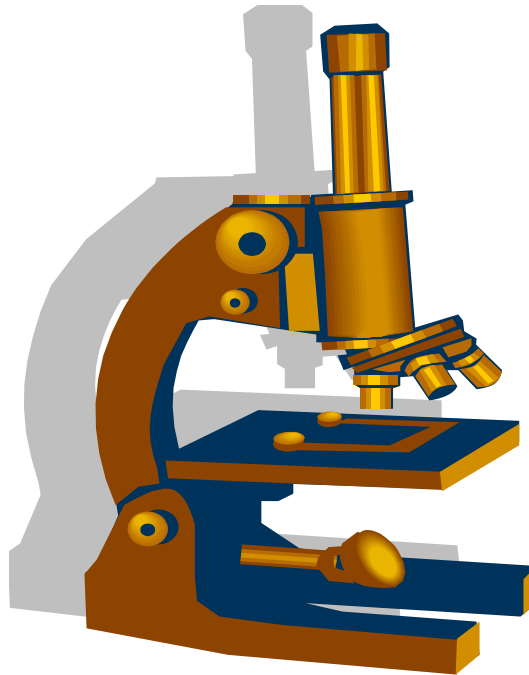
Action

- Demos & PEOE



Tweaking a “Cookbook” lab

- Preparing a wet mount





Wiki link



<http://www.dpcdsb-ssc.wikispaces.com/>



- Join this Wiki
- Recent Changes
- Manage Wiki

Search



☐ All Pages

home
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Curriculum Connections
Differentiated Instruction
Earth and Space Science
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Grade 10 Science
Grade 7 & 8 Science
Grade 9 Science
Literacy
Other
Pasco
Physics
Riverwood
Safety
Science
Science Fair
Science Writing Teams
Smarter Science



[click here more info!](#)

Welcome to DPCDSB's Science Wiki!

This wiki was set up to encourage the sharing of ideas, best practices, activities, lesson plans, etc.
Use the course links on the left panel (navigation bar) to navigate, edit, and post.

Updates:



1. Congratulations to St. Edmund Campion's Science Department for winning the 2010-2011 ExploreLearning Leaders!

This is the coolest digital book...ever! Makes me wanna buy an iPad!

http://www.ted.com/talks/lang/eng/mike_matas.html

**[2. Grade 7 & 8 Science](#) Page is Updated - Some Sample Unit Plans are posted from our
Still to come: Fluids, Pure Substances & Mixtures, and Water Systems - stayed tuned!**



3. Access Codes for Nelson's Catholic Values Tool Kit - available through public folders!

- it provides lesson plans & resources that help make connections between science & our Catholic values

4. Smarter Science: 2nd Annual Inquiry By The Bay

- Wednesday, August 03, 2011 at 8:30 AM - Thursday, August 04, 2011 at 4:00 PM (ET) @ Innisfil, Ontario
- Three levels of learning: 1. beginner (new to Smarter Science); 2. moving to the next level; 3. consultants, supervisors and

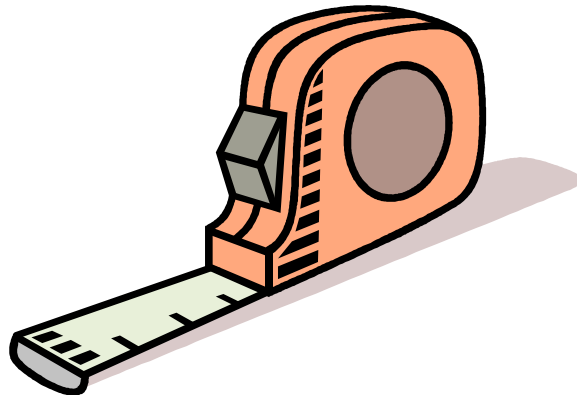
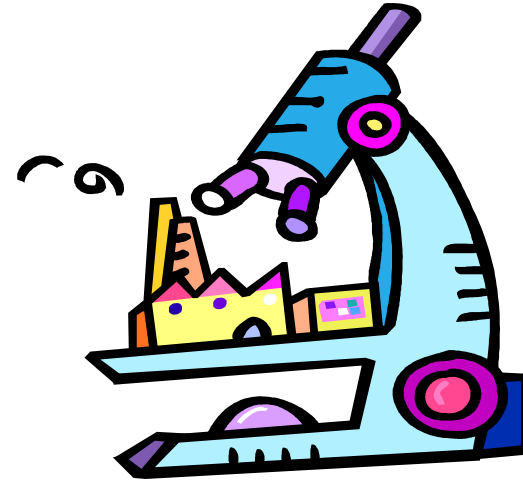
New Approaches to Traditional Labs

- Revise the:
 - Question Section
 - Materials Section
 - Procedure Section
- Take Away the Data Table or Chart
- Do the Lab First



Llewellyn,
Teaching High School Science Through Inquiry, pg. 91-95
Inquire Within, pg. 76 - 78

Making Good Observations



Mystery Powders



**How many drops of water
can fit on a penny?**

